

Melvin Butte Forest Management Project
Silviculture Treatment Specifications and Implementation Guidelines
Stewardship Imp Units 4
Fuels Imp # TBD

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Management Allocations:

LRMP: Front Country Seen/Unseen MA 18

NWFP: Matrix

EA Unit 38 (north portion)

EA Treatment Name: Thinning (Un-evenaged)

Secondary treatments: Underburn (prescribed), pile burning, mastication, pruning

Structure: Old growth ponderosa pine stand with a significant encroaching understory and little to no brush component.

Goals of thinning:

Reduce ladder fuels within and among old growth ponderosa pine

Reduce level of mistletoe in small trees

Retain largest and healthiest ponderosa pine from the numerous thickets interspersed and between large old growth ponderosa pine

General Silviculture Prescription

- Retain all old growth ponderosa pine regardless of size. Indicators include orange-reddish flaky bark. Some of these may be small i.e. <12" dbh and may be spatially conjoined with or near a larger old growth ponderosa pine.
- Retain all Doug-fir and any five needle pine (if discovered).
- Radially thin all 4.5ft tall trees up to 8.9" dbh trees (except those from #1 - old growth ponderosa pine) from within 25ft from all old growth ponderosa pine trees that are >18" dbh.
- In remaining areas throughout the stand, thin **ALL** 4.5ft tall up to 8.9" dbh ponderosa pine that indicate **ANY** infestation of dwarf mistletoe (defined as DMR 1-6) **AND** all 4.5ft tall up to 12" dbh white fir, lodgepole and juniper.
- Thin remaining trees/ areas and thickets retaining the healthiest and largest ponderosa pine at 36TPA, (35ftx35ft when equilateral distances) **HOWEVER** allow spacing to vary among trees ranging from 2-50ft based on health, vigor, room to grow, presence of overstory mistletoe and favoring a clumpy/ random distribution.

Stand Characteristics

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<i>Unit</i>	<i>Acres</i>	<i>Aspect</i>	<i>Slope</i>	<i>Site Index (PIPO)</i>	<i>Plant Assoc. (Volland 1982)</i>
4	33	NE	0-5	91	Mixed conifer –dry CWS115

Table 1. Stand characteristics for Unit 4

BA/acre 0-9" dbh	BA/acre 9.1-21" dbh	BA/acre 21"+ dbh	Total BA/acre- all size class	TPA 0-9" dbh	TPA 9.1-20.9" dbh	TPA 21+" dbh	Total TPA all size classes
22	29	110	160	1160	20	27	1206



Fuels considerations-

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Stand has deep duff collars as well as deep needle mats throughout. 1000 hour fuels are high and approximate 15 tons an acres due to the years of western bark beetle and other competition induced mortality. Desirable outcomes of burning include maintenance of old growth quantity to retain old growth character.

Pruning

Leave trees that are left in the units may be pruned to reduce further spread into the stand. Pruning may occur up to 2/3rd of the live crown. Leave trees with more than 75% infestation may be girdled or pruned entirely for snag creation.

Prescribed Fire

These units have already had a small tree thinning/ fuel ladder treatment with some elevated acceptable mortality in the residual trees. These ARE NOT objectives, but rather shall be treated as constraints. This unit is along a well-traveled visual corridor and imposing high mortality in large leave trees will incur future danger/ hazard tree mitigation procedures. Silviculture objectives of such a burn are to improve the seed bed by duff and fuel removal and removal of encroaching white fir and juniper and small <4.5ft tall ponderosa pine with dwarf mistletoe.

Table 2. Guiding parameters for prescribed fire implementation

Size Class		Acceptable Mortality (%)	Acceptable TPA mortality (upper threshold)
Name	DBH Range		
Seedling/Sapling	<5"	0 – 30	40
Pole	5" - 8"	0 – 10	20
Small 1	8" - 15"	0 – 10	10
Small 2	15" - 21"	0 – 10	5
Medium/Large	21"+	0 – 20	5